# **Networking *with* a Network: The Liverpool African Committee 1750-1810**

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## Abstract

Historians are increasingly using networks as an analytical framework. However, recent research has stressed the inherent problems with networks, including networking institutions. We therefore have to consider why and in what ways actors do, or did, engage with networks. This paper posits a novel interdisciplinary methodology by bringing together regression analysis, visual analytics and history to analyse actors' relationships *with an institution*, rather than with one another. This methodology, illustrated by the case study of the Liverpool African Committee, 1750-1810, demonstrates that actors' relationships with an institution may be *affective* or *instrumental*, reflecting different relationships *with*, and uses *of*, the network. Moreover, actors' relationships with an institution are not static and change over time. The methodology and case study presented in this paper suggest a reassessment of our understanding of metropolitan business networking institutions to reflect the complexity of their use.

## Introduction

Business networks are now a common tool for analysis by historians. In the past, the historiography has posited them as an inherent positive within the commercial context. This has certainly been the case when historians have discussed ascribed trust networks based on kinship, religion or ethnicity.[1] More recently however, historians have considered the potential problems associated with networks, which has included recognition of the fact that ascribed trust networks can be the most abused.[2] Others have considered issues such as rent-seeking and lobbying behaviour, and how time consuming and difficult networks can be to construct and maintain.[3] This reassessment has included formal networking institutions such as guilds and trade associations. Such 'metropolitan business networks' should promote the interests of their members and the local and national economy through the easy transference of information.[4] This is because they consist of a web of overlapping memberships of participatory organizations, formally independent of the state, acting on behalf of a collective and public interest.[5] However, such formal networking institutions were far from always successful. Guilds often retarded progress, and trade associations and

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1 On types of trust see Sako, *Prices, Quality and Trust*, pp.37-38;Mathias, "Risk, Credit and Kinship"; Rose, "The Family Firm"; Nenadic, "The Small Family Firm"; Prior and Kirby, "The Society of Friends"; Beerbühl, "The Commercial Culture".

2 Morgan, *Bright-Meyler Papers*; Forrestier, "Risk, Kinship and Personal Relationships".

3 Jones and Ville, "Efficient Transactors"; Crumplin, "Opaque Networks"; Hancock, "The Trouble with Networks"; Popp, "Building the Market".

4 Casson, "An Economic Approach", 33.

5 Baldassarri and Diani, "The Integrative Power".

town councils were often counter-productive and inward looking.[6] Sometimes they were used for social reasons rather than commercial purposes.[7] Indeed, it has been suggested that such networks are a 'micro-social order' in which members often form an affective commitment to the institution over and above that which they feel towards other individual members.[8] Therefore, whilst we might define a business network as '*a group or groups of people that form associations with the explicit or implicit expectation of mutual long-term economic benefit*', we can no longer assume that metropolitan business networking institutions were a positive economic good for every member (let alone the wider community), or even that members joined and used that institution for the purpose of networking with a view to economic gain.[9]

This article questions the role of metropolitan business networks through the case study of the Committee of Merchants Trading to Africa from Liverpool (hereafter African Committee). It brings together history, regression analysis and visual analytics in a novel interdisciplinary methodology to investigate how and why actors used formal networking institutions such as trade associations. In doing so, it is not so interested in the relationship *between actors*, but of the relationship of the actors *with the institution*. This article first outlines the formation, role and membership of the African Committee. It will then explain the methodology used here before discussing in detail how Liverpool merchants networked *with* this networking institution. The conclusion argues that actors used the Liverpool African Committee in both *instrumental* and *affective ways*, but not necessarily when and how we might expect. It also outlines the potential wider implications and uses of this methodology.

**The Liverpool African Committee**

Liverpool 1750 to 1810 provides an excellent prism through which to study networking via formal trade associations. During this period the port was well connected to the hinterland as well as international markets and fulfilled various port town functions such as being an entrepôt, and an insurance and financial centre.[10] Liverpool had benefitted greatly from Britain's Atlantic trade and by 1804 was hailed as the second seaport of the realm.[11] The town was also the leader in the trans-Atlantic slave trade by 1750 and until its abolition in 1807 as shown in Table 1.[12]

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6 Rosenband, "Social Capital"; Ogilvie, "Guilds, Efficiency, and Social Capital"; Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network".

7 Goddard, "Medieval Business Networks".

8 Lawler, Yoon and Thye, "Social Exchange".

9 Haggerty, *'Merely for Money'?*, p.164.

10 Price, "Economic Function".

11 Clemens, "The Rise of Liverpool"; Montefiore, *Trader's and Manufacturer's Compendium*, 476.

12 The abolition bill of 1807 only related to the transatlantic slave trade, inter-colonial slave trade remained legal, as did slavery in the British West Indies and India. See Williams, "The British West Indian Slave Trade"; Eltis, "The Traffic in Slaves"; Major, *Slavery, Abolitionism and Empire*.

**Table 1: No of Liverpool Slave Ships by Decade, 1750-1809**

| Decade | Total number of Liverpool voyages | Total number of English Voyages | Liverpool voyages as a % of English Voyages |
|---|---|---|---|
| 1750-1759 | 496 | 906 | 55% |
| 1760-1769 | 705 | 1296 | 54% |
| 1770-1779 | 711 | 1186 | 60% |
| 1780-1789 | 558 | 782 | 71% |
| 1790-1799 | 969 | 1284 | 75% |
| 1800-1809 | 956 | 1192 | 80% |

Source: Eltis et al, Transatlantic Slave Trade Database.[13]

The port also had a variety of formal and informal institutions as befitted its urban status.[14] Given the important role Liverpool played in the slave trade, there was also the Liverpool African Committee.[15] The African Committee was part of a national Company of African Traders set up in 1750 (London and Bristol were the other two ports involved). The national company was set up by 'An Act for Extending and Improving the Trade to Africa' designed to promote and regulate the British [slave] trade in West Africa in response to the forthcoming demise of the Royal African Company in 1752.[16] As Liverpool was by then the leader in the slave trade, this was clearly an important institution for the town and especially for those merchants trading to Africa. Furthermore, the fact that the slave trade was highly capitalised meant that many of the members of the African Committee were successful, and often leading, merchants. We might assume that with the rise of the abolition movement from the 1780s, and especially the regulation of the slave trade with Dolben's Bill (and subsequent Act) of 1788 that the Committee would also be important in the

13 Simple query on vessels leaving Liverpool per decade at http://www.slavevoyages.org/, searched 2 Feb 2016. Total number of enslaved Africans embarked were: 121,003; 175,181; 190,449; 185,121; 268,405 and 260,670 in those decades respectively.

14 On the rise of civic society in Britain see Borsay, *The English Urban Renaissance*. For more on the early cultural context for Liverpool see Wilson, "The Cultural Identity of Liverpool". For charities and other institutional buildings see Longmore, "Civic Liverpool: 1660-1800", 140-166.On the Liverpool chamber of commerce see Bennett, *The Voice of Liverpool Business*. For more on the networking through some of these institutions see Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network".

15 352/MD1, Committee Book of the African Company of Merchants (hereafter Committee Book).

16 On the history of the Royal African Company and its predecessors see Davies, *The Royal African Company*.

defence of the trade.[17] We might also expect that given that the African Committee represented Liverpool's interest in extending and improving the slave trade to Africa, actors would join and engage positively throughout the period, but perhaps more so in the late 1780s and early 1800s in order to defend the trade.[18]

The total membership of the African Committee over this whole period was 280, however, only those actors who had a firm record of attendance in Liverpool are included, a total of 245. Of these, not all were slave traders (for example Edgar Corrie), but the majority of them were, and most were also on the town council.[19] Indeed, William Davenport is noticeably absent.[20] As we shall see later, active members also included merchants who had previously been (part) owners of slave trade vessels but had subsequently withdrawn from the slave trade or belonged to families involved in the trade whilst that individual was not. Noticeable actors in this category include Jonathan Blundell, the Manesty family, and Ralph Earle. The Liverpool African Committee members first met on the 3rd July 1750, and as per the provisions of the Act setting up the African Company, came together to elect three members to represent their interests in London, which was continued annually. Those wanting to trade to Africa became 'free' of the Company for a fee of forty shillings, paid to Liverpool's Town Clerk. The Committee met in the Exchange, within the Town Hall, except in the latter years when they met in the Court Room of the Town Hall. In the early years the Liverpool members met in July and February of each year, although from July 1754 they met only annually up until the African Company of Merchants was abolished in 1821.[21] Unfortunately, the Committee Book only records attendance and the annual election of the London representatives; particular roles (such as secretary or treasurer), agenda items or a record of discussions are not normally given. Exceptions to this are only found early on, when a couple of resolutions are recorded which note that the governor and other officers on the African coast should not trade in slaves on their own account, nor use Company property for their own private trade.[22] Whilst it is likely that members discussed the upkeep of forts on the African coast, French competition, regulation of the slave trade, the abolition movement, and the effects of war, we cannot know for certain.

**Methodology**

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17 Sanderson, "The Liverpool Delegates". There was also the Slave Trade Carrying Act of 1799 and the Foreign Slave Trade Act of 1806 before the Act for the Abolition of the Slave Trade in 1807.

18 Committee Book, f.1.

19 Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network". On the council and its merchants see Ascott et al, *Liverpool 1660-1750*, chapters five and six.

20 For more on Davenport see Richardson, "Profits in the Liverpool Slave Trade".

21 The only exceptions to this are: On 3rd May 1758 a note was made about a possible petition being sent to London; and on 11th August 1808 one of the London representatives (Simon Cock) resigned mid year, and an extraordinary meeting was called to elect a new representative (Matthew Pemberton). Committee Book, ff. 28, 139.

22 Committee Book, ff. 16, 21.

As mentioned above, historians have started to complicate their understanding of networks, including personal and institutional networks through the adoption of methodologies from socio-economics, mathematics and computer science as well as the use of visual analytics.[23] Scholars have investigated organisational commitment through the use of networks, but our understanding between 'actual social relationships and organisational commitment is quite limited'.[24] Indeed, we are not aware of any attempt to measure the strength or type of relationships that actors had *with a networking institution*. This article brings together history, regression analysis, and visual analytics to achieve this. The resulting visualisations elucidate and quantify the actors' relationships with an institution in a visually appealing and easily accessible way.

The case study of the African Committee helps to answer questions about the historical relationships of actors *with* networking institutions. Individuals join institutions for a variety of reasons, but under two main categories, *instrumental* purposes (to access tangible resources and information) and expressive or *affective* reasons (social support, pleasure and identity conferral).[25] These are not necessarily mutually exclusive, but we might expect more actors to have joined a trade association such as the African Committee for *instrumental* reasons, with *affective* ties being a beneficial consequence, rather than vice versa. The model posited here seeks to assess actors' relationships with the African Committee under these two categories. These two categories, or groups, are therefore derived from one (single-mode) network, which represents a reversal of the two-mode (or bi-partite) network often used to establish links between two different networks (or sets).[26] Using a single-mode network also facilitates the use of a variety of network measures which are mostly designed for use on single-mode (set) networks.[27]

An important assumption in the identification of the two groups here is that if actors joined and left when others did ('with the herd') they were less committed to the economic aims of the African Committee and are more likely to have joined for *affective* ties (at the very least they did not demonstrate strong long-term commitment to the network). If however, an actor joined and left on his own independent timings, we have assumed that that actor joined for more *instrumental* reasons concerned with his economic aims. It should be noted that the identification of interpersonal relationships, i.e. friendships, is not the aim of this study. However, as we shall see, we can identify the relationships actors had *with* the network.

The period covered by the case study is from 1750 when the African Committee was formed, until 1810, just after abolition of the British transatlantic slave trade. There is therefore a self-limiting number of actors due to a finite membership and historical context. This means that we have not needed to use a name generator, which also solves issues of ego-centricity and the tendency to reflect stronger ties often found in

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23 Leunig et al, "Networks in the Premodern Economy"; Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network"; Buchnea, "Transatlantic Transformations".

24 Kim and Rhee, "Contingent Effect of Social Networks", p.480.

25 Kim and Rhee, "Contingent Effect of Social Networks", pp.479-483.

26 Newman, "Scientific Collaboration Networks".

27 Latapy et al, "Basic Notions".

such methodologies.[28] This sample also represents one hundred per cent of active membership over the period 1750-1810. The membership is organised by decade allowing for the analysis of medium-term trends.

In order to assess the type of ties actors had with the African Committee, two simple OLS (ordinary least squares) regression models were applied to the attendance data using GRETL.[29] The attendance data was entered in a simple matrix with attendance being noted as numerical one (1) and absence a zero (0). In order to avoid multi co-linearity control years and control actors were chosen for each decade.[30]

*Model 1* identifies statistically-significant actors who most regularly interacted with the network (propensity to attend) and if they did so when most other people attended (with the herd). Such actors are highlighted with a positive result in the regression and visual analytics. Those actors who did *not* attend with the general swell of attendance produced a negative result. Those actors with a positive result are assumed to be those with commitment via predominantly *affective* ties (social support, pleasure and identity conferral), whilst those with a negative result are assumed to be those more independent of the general membership, and therefore have commitment via predominantly *instrumental* ties (access to tangible resources and information).

A panel regression model is specified in which the probability that individual $i$ interacts in period $t$ is

$$\text{prob}(y_{it} = 1) = c + a_t + b_i + u_{it} \qquad (1)$$

where $y_{it}$ is the binary element in the $i$th column and $t$th row, $c$ is a constant, measuring the relative frequency with which an actor on average interacts with the network, $a_t$ is a period-specific factor reflecting the above-average popularity of the network at time $t$, and $b_i$ is an actor-specific factor reflecting the disposition of the $i$th actor to interact more frequently than average. The variable $u_{it}$ represents an unobservable random disturbance which can be either positive or negative; it is assumed to have zero mean and a constant variance, independent of $i$ and $t$. Model one does not address time patterns in attendance.

Therefore, under this model we might expect to see people attending together if there was an *affective* (positive) relationship and more independently if there was an *instrumental* (negative) relationship. Those actors who used the African Committee for purely social (*affective*) reasons might be expected to have attended less when

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28 Name generators limit the size a network chronologically, numerically and geo-spatially through questions such as: name your neighbours, name your six closest colleagues or friends. Campbell and Lee, "Name Generators", and Lin, *Social Capital*, pp.87-88.

29 GRETL is a freely available statistical package for multiple computer platforms available from gretl.sourceforge.net.

30 That is, too many dummy variables ending up on the same straight (regression) line and distorting the outcome. The control years are: 1751; 1760; 1770; 1782; 1798; and 1803. The control actors are: Edward Deane (1750-1759); Robert Hesketh (1760-69); Robert Nicholson (1770-79); John Brown (1780-89); James Watkinson (1790-99); and William Harper (1800-09).

trade was difficult and might have had to contribute in a more meaningful way. In contrast, we would expect those merchants who joined for more *instrumental* reasons to attend more regularly, and especially so when the slave trade was under threat. Of course, there may be actors who had both *affective* and *instrumental* ties to the network at the same time or with no discernible pattern observed using this methodology.[31] These actors fall into a third category in our results, that of 'statistically not significant'.

*Model 2* identifies particular time patterns in attendance at meetings. It tests for whether attendance increased or decreased over time at a constant rate. It also tests for persistence in attendance. That is, where attendance in one year increased the probability of attendance in the next; or, where attendance in one year increased the possibility of attendance in the next but one – a delayed but persistent attendance. Another way of seeing this is as alternation, where attendance in one year discouraged attendance in the next. Time dummies are replaced with meaningful variables: a linear time trend, $t$, whose values range from (0) at the start of the period, to $T$ at the end, as well as lagged values of the dependent variable to identify attendance in previous years.

$$\text{prob}(y_{it} = 1) = c + a_0 t + a_1 y_{it-1} + a_2 y_{it-2} + b_i + u_{it} \qquad (2)$$

A time trend variable, $t$, is formed by stacking $N$ sequences on top of each other. A variable $y_{-1}$, representing a single lag in the dependent variable is generated by taking the values of the dependent variable for each individual for periods from 0 to $T - 1$, adding an empty cell at the beginning, and then stacking them as before. A double lag variable, $y_{-2}$, is captured by taking the values of the dependent variable for each individual for periods 0 to $T - 2$, adding two empty cells at the beginning, and then stacking them in the same way. The estimated regression is

$$y = \mathrm{c} + \Sigma_t a_t w_t + a_0 t + a_1 y_{-1} + a_2 y_{-2} + \Sigma_i b_i x_i \qquad (3.1)$$

where for some $i = j$, (3.2)

$b_j = 0$;

The parameters $a_0$, $a_1$, $a_2$, $b_i$ are estimators of the parameters of the model represented by equation (2).

As with model one, actors with a positive regression result will be those identified as having predominantly *affective* ties, whilst those with a negative result will be those identified as having predominantly *instrumental* ties. This is as a result of the regression model starting from the point of the general up- and down-swell of attendance. We might expect to see that those with a more *instrumental* relationship with the African Committee attended more regularly and independently 'of the herd', and particularly so when the slave trade was under threat, such as during war time, competition from the French, or abolition.

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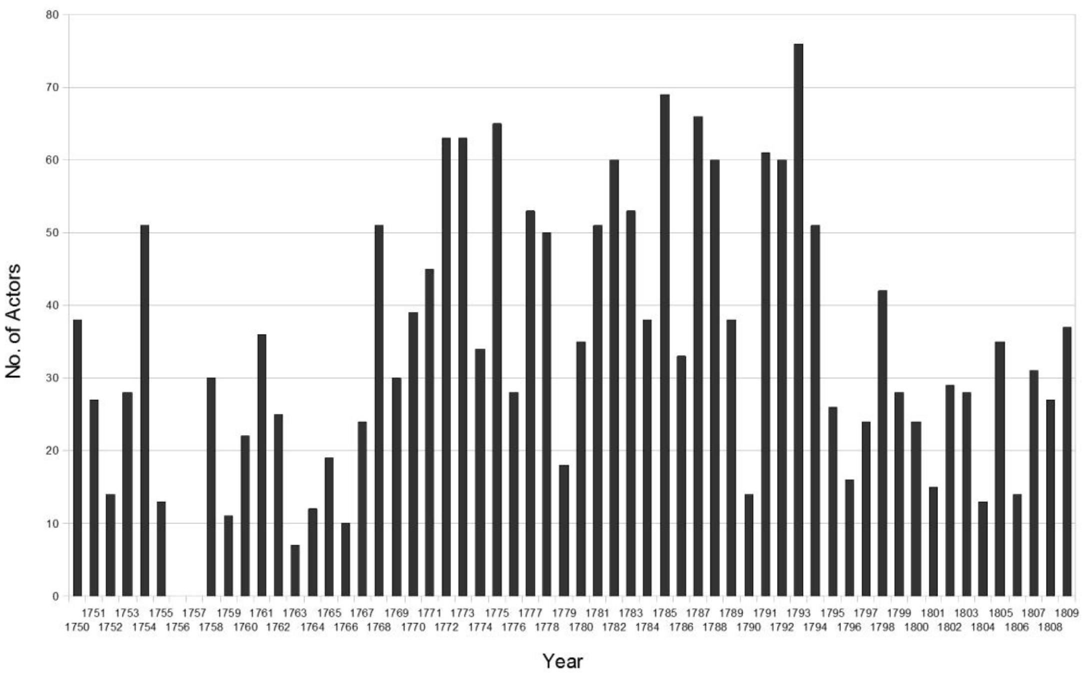
31 It is likely that some actors used the network for both purposes. However, the proposed model does not identify these actors as it tests for those members falling into one or the other categories, i.e. *affective* or *instrumental*.

The results of this panel regression are shown using visual analytics (bar charts, linear plots and network cluster graphs), ensuring the results are easily accessible and readable.[32] The historical context is used to analyse these results.

**Networking *with* a Network**

Figure 1 shows the number of active attendees from 1750 to 1809 by year.[33] It is clear that attendance was quite volatile. Attendance was also relatively low in the 1750s and 1760s, just when Liverpool had become dominant in the slave trade. There was much higher attendance in the 1770s and 1780s with the crises of the American War of Independence and the start of the abolition movement – which is what we might expect (although note that attendance was not as high during the Seven Years' War (1756-1763)). Attendance was at its highest in 1793 with the outbreak of the French Wars and the credit crisis of that year.[34] What was not expected however, is the relatively low attendance in the late 1790s, and especially the 1800s, when abolition became a real threat once more. What is interesting to note is the increasing attendance in 1808 and 1809, after abolition.

**Figure 1. Number of Active African Committee Members, 1750-1809**




Source:352/MD1, Committee Book of the African Company of Merchants.

*Model 1*

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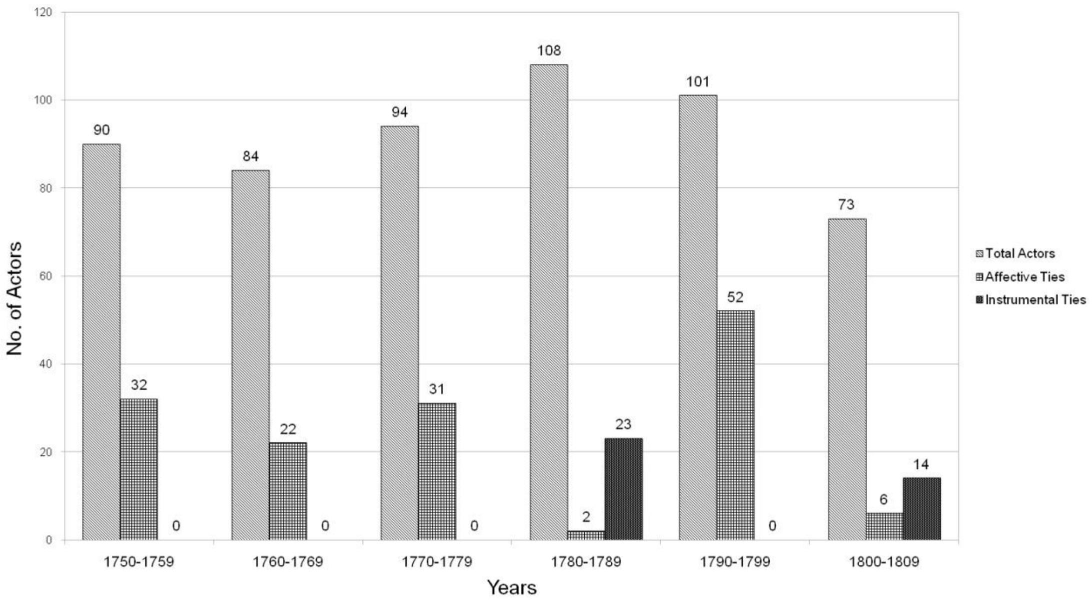
32 Presenting the results of this regression in the usual table format would produce twelve pages of results.

33 Data for the years 1756 and 1757 are missing from the records.

34 On the credit crisis see Hyde et al, "The Port of Liverpool".

Applying Model 1 to the attendance figures above immediately highlights that most statistically-significant actors had *affective* (positive) ties with the African Committee over the whole period. Indeed, as highlighted in Figure 2, only in the 1780s and 1800s did any actors have an *instrumental* (negative) relationship. Given that the African Committee was primarily a trade association, this is surprising. In the early decades there were other outlets for socialising, such as the Ugly Face Club and the Mock Corporation of Sephton, which were used by many slave trade captains and merchants. However, these were also used for career progression to the Town Council, for example by William Boates or Ralph Earle, so perhaps the African Committee did not need to be used in this way (*instrumentally*) at this time.[35] Individuals clearly used the various institutions in a very personal manner.

**Figure 2: Total, *Affective* and *Instrumental* Ties with the African Committee, 1750-1809 by decade***




<u>Source:</u>352/MD1, Committee Book of the African Company of Merchants, and model 1 regression analysis as above.

* The difference between the total and negative and positive actors are the non-statistically significant actors identified in the regression analysis.

The crises of the 1780s severely affected members' relations with the African Committee. From thirty-one members having *affective* ties in the 1770s, only two have such ties in the 1780s, whilst compared to zero in the 1770s, there were then twenty-three members with *instrumental* ties. Clearly more members were attending meetings more *regularly* and independently in this decade. Figure 1 shows that meetings were well attended in 1781, 1782 and 1783 during the American War of Independence, which is what we might expect. Attendance then fell in 1784 before rising again in 1785. The very high attendance of 1787 coincides with the formation of the Committee for the Abolition of the Slave Trade and in 1788 by Dolben's Bill

35 Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network".

(enacted the same year), despite the fact that it has been argued that the Liverpool Slave Traders were very slow to react to abolition.[36] Fewer actors had instrumental ties in the 1790s when the abolition movement waned slightly, the French Wars began,and the 1793 credit crisis occurred.[37] However, the credit crisis was mitigated in Liverpool by the Town Council, on which many of those on the African Committee also served, so perhaps the latter was not required to be used in an *instrumental* way.[38] This may explain why fifty-two members used the African Committee through *affective* ties in the 1790s, more than in any other decade. That trend reversed again drastically in the 1800s, when only six members used the African Committee through *affective* ties. Other opportunities did exist for more social networking, such as the Lyceum which was popular by this time. However, drinking clubs such as the Ugly Face Club and the Mock Corporation of Sephton were in decline, and there was never much cross over between the Lyceum and the African Committee, so it is unlikely that African Committee members were attending these institutions instead.[39] What is interesting is that so few members used the African Committee for *instrumental* reasons just when abolition was becoming a reality. However, it is possible that the elite slave traders were becoming an isolated clique which discouraged others from attending.[40] Another explanation would be that many merchants had a varied business portfolio in any case, and were already redirecting their trade having realised that abolition was a distinct possibility.[41]

Another way to visualise the regression analysis is through those actors with the 'most' *affective* and most *instrumental* ties being shown as coefficients, i.e. the strength of those ties. In Figure 3 these are shown as those with the highest coefficient (most *affective*) and lowest coefficient (most *instrumental*) ties.[42] We can see that both groups of actors followed a similar trend, thereby providing a subtler view. It also demonstrates that both sets of actors used their ties in a relatively more *instrumental* way in the 1780s and 1800s, with both groups using their ties in a far more *affective* way in the 1790s. This highlights the fact that actors access a networking institution for social and commercial reasons at the same time. It also supports the overall trend demonstrated in Figure 2, that some actors used the African Committee in times of crisis. What is also interesting is that whilst only six actors were using the African Committee in a mostly *affective* way in the 1800s, other members were exploiting it for *instrumental* purposes. However, those few actors using it *instrumentally* did so to a far greater degree in the 1800s (and especially in the

36 Sanderson, "The Liverpool Delegates". The Act regulated the ratio of slaves to a vessel's tonnage and ruled that surgeons must be carried on board and keep a journal.

37 Drescher, "Whose Abolition?";Hyde et al, "The Port of Liverpool".

38 Hyde et al, "The Port of Liverpool".

39 Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network".

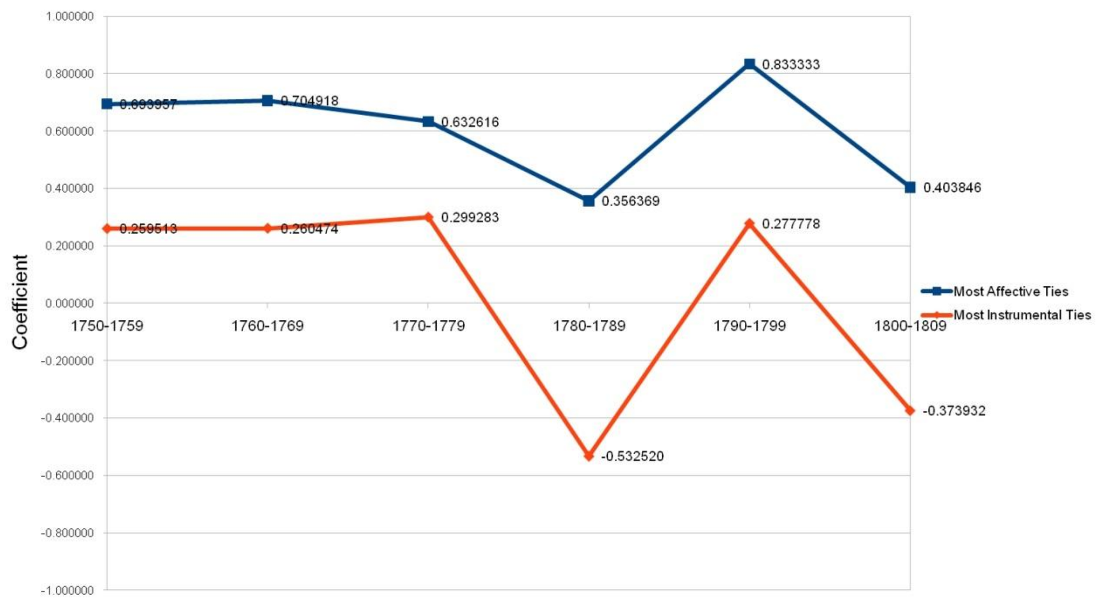
40 Haggerty and Haggerty, "Visual Analytics".

41 See for example, Haggerty, "Liverpool, the Slave Trade". For an exception see Richardson, "Profits in the Liverpool Slave Trade".

42 The lowest coefficients represent nine actors (1750s), 10 actors (1760s), 16 actors (1770s), 1 actor (1780s), 18 actors (1790s), and 5 actors (1800s). The highest coefficients represent 1 actor (1750s), 1 actor (1760s), 4 actors (1770s), 2 actors (1780s), 1 actor (1790s), and 1 actor (1800s).

1780s). These actors may have been those with a greater (including proportional) investment in the slave trade, who had more to defend, which is what we might expect. However, the lower number of actors defending the trade in this period is surprising given that Liverpool still dominated the British slave trade at this time. It is also possible, with reference to the higher attendance figures of 1808 and 1809 (as shown in Figure 1) that those such as James Penny were trying to take advantage of other trading opportunities in West Africa such as palm oil.[43]

**Figure 3: Actors with the Most *Affective* and Most *Instrumental* Ties, by Decade**

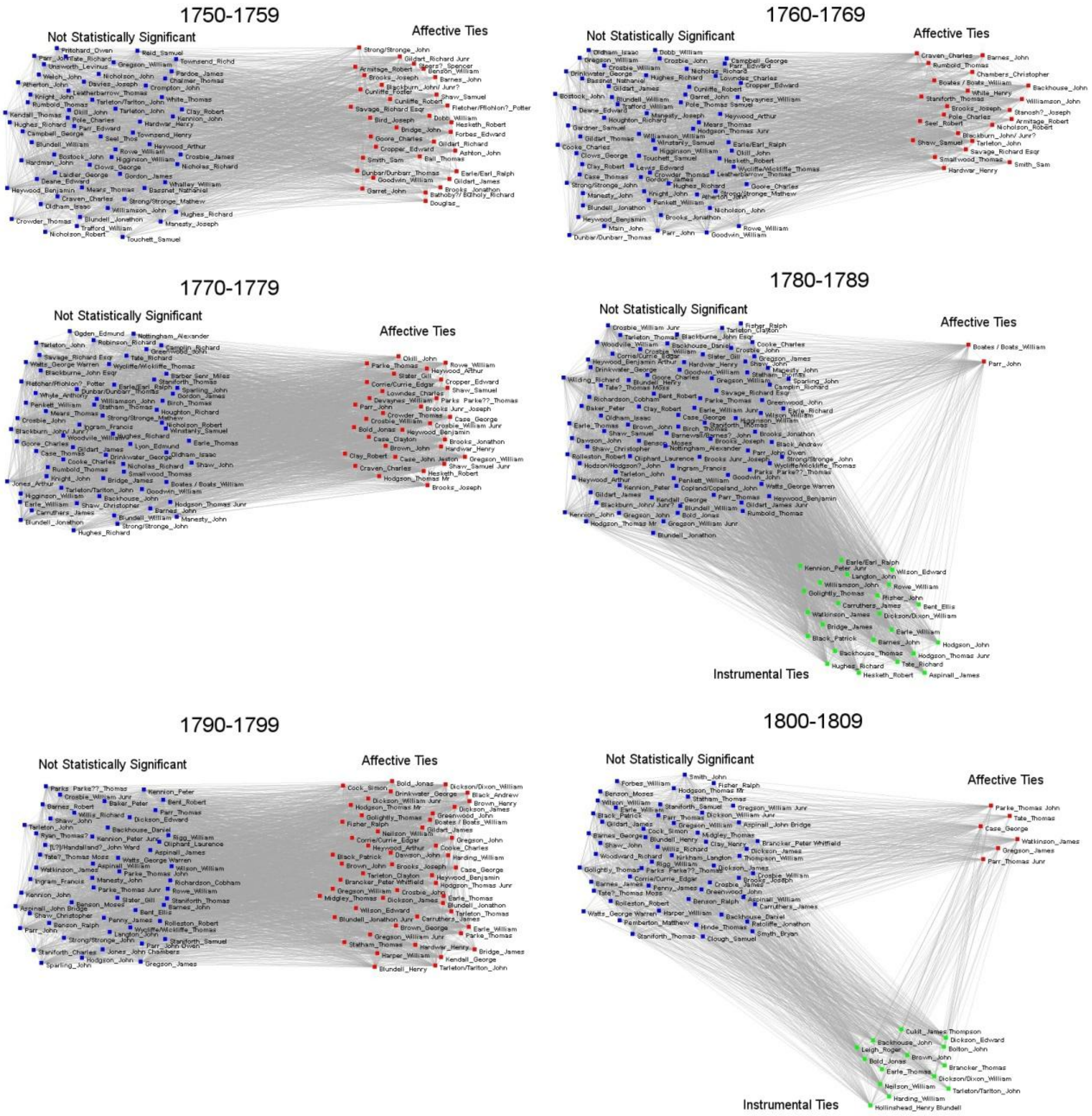



<u>Source:</u>352/MD1, Committee Book of the African Company of Merchants, and Model 1.

Another way to visualise regression analyses in this instance is by clustering the names of the individual actors by their type of use of the networking institution. Figure 4 shows this clustering by decade. Actors on the left are those that are statistically insignificant; on the top right are those with an *affective* (positive) relationship with the African Committee; and on the bottom right (where they exist) are those with an *instrumental* (negative) relationship.

**Figure 4: Cluster Analysis of Actors with *Affective* and *Instrumental* Ties, by Decade**

43 Many slave traders moved into trading palm oil. Tibbles, "Oil not Slaves".




Source:352/MD1, Committee Book of the African Company of Merchants, and Model 1.[44]

It is not possible here to analyse all these actors individually, but highlighting some key actors demonstrates the complexity of their relationships with this networking institution. One major point is that not all the major slave traders are found in the groupings of statistically-significant actors. Moreover, major slave trading families are often split between those with *affective* and *instrumental* ties. For example, in the 1780s, Jonathon Blundell (zero voyages), William Gregson (William Gregson 21 voyages, William Gregson Junior 19 voyages, and William Gregson Senior 1 voyage) and Peter Kennion senior (zero voyages) were not statistically significant actors, whilst Thomas Hodgson junior (22 voyages), Ralph Earle (zero voyages) were using

[44] The network graphs are produced using software developed by the authors Haggerty and Haggerty. "Temporal Social Network Analysis for Historians"; Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network". Of course, software such as Pajek or Gephi may also be used to make this approach more accessible to historians.

the African Committee *instrumentally*.[45] Thomas Golightly (zero voyages) and Peter Kennion junior (zero voyages) all had *instrumental* (negative) relationships. The only two actors with *affective* (positive) ties in the 1780s were John Parr (zero voyages) and our old friend William Boates (29 voyages). What is interesting about William Boates is that he never used the African Committee in an *instrumental* way (he only vacillated between *affective* ties and being non-statistically significant), despite investing in at least 150 voyages from the 1750s to the 1790s as both captain and investor. We cannot therefore say that slave traders of a certain status or of a particular family used the African Committee in a certain way. Another example is the Blundells, leading slave traders before the American War of Independence, who did not use their ties with the African Committee in an *instrumental* manner, yet they were active members even once their investment in the slave trade (if not trade with the West Indies) had ended.[46] Similarly, the Peter Kennions are interesting because neither of them appeared to have ever invested in a slave trade voyage, although a John Kennion was involved in twenty-four voyages, in the 1750s and 1760s, but who only attended in 1753.[47] Edgar Corrie was not a slave trader, but his Unitarianism only inhibited him so far in having links with related commercial activities. It did not stop him from trading in West Indian cotton or networking and owning shares in a privateering vessel with prominent slave traders Thomas Earle and Francis Ingram.[48] This shows that there was no straightforward link between the apparent raison d'etre of the African Committee and the way in which its members interacted with it.

At the same time, many members of the African Committee had *affective* ties with other institutions. Ten African Committee members were also members of drinking clubs in the 1750s, none of which were statistically-significant actors.[49] Another eleven actors in the 1760s also used the drinking clubs, but five of these did have significant *affective* ties with the African Committee: William Boates (42 voyages), Thomas Hodgson junior (3 voyages), Thomas Rumbold (35 voyages), Robert Seel (zero voyages) and John Backhouse (6 voyages).[50] The African Committee was not their only institutional social outlet, and yet they still did not use it for primarily *instrumental* reasons. Some did of course: In the 1800s John Tarleton (John Tarleton Junior 2 voyages; John Tarleton 13 voyages) and Thomas Earle (8 voyages) moved

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45 We have used slave vessel ownership as shown in the Atlantic Slave Trade Database http://www.slavevoyages.org/ for each decades as discussed. Other actors may have of course had an interest by being involved in providing goods for barter on the African coast, necessary supplies for the slave plantations or sugar importing and processing.

46 The Blundells were involved in businesses with Kingston, Jamaica, at the very least. Haggerty and Haggerty, "Visual Analytics"; and see their relationship with the Rainford brothers in Haggerty, *"Merely for Money"?*, pp.179-88..

47 Transatlantic Slave Trade Database, search = Kennion, P as owner and place of departure as Liverpool, accessed 20 Aug 2015. An Edward Kennion was also involved in one voyage.

48 Corrie was a Liverpool merchant and pamphleteer on commercial matters. Checkland, *The Gladstones*, 17-18.

49 They were Robert Clay, John Kennion, John Welch, John Strong(e), Benjamin Heywood, Sam Smith, Thomas Mears, Robert Hesketh, Thomas Rumbold and George Clows. Haggerty and Haggerty, "Life Cycle of a Metropolitan Business Network"..

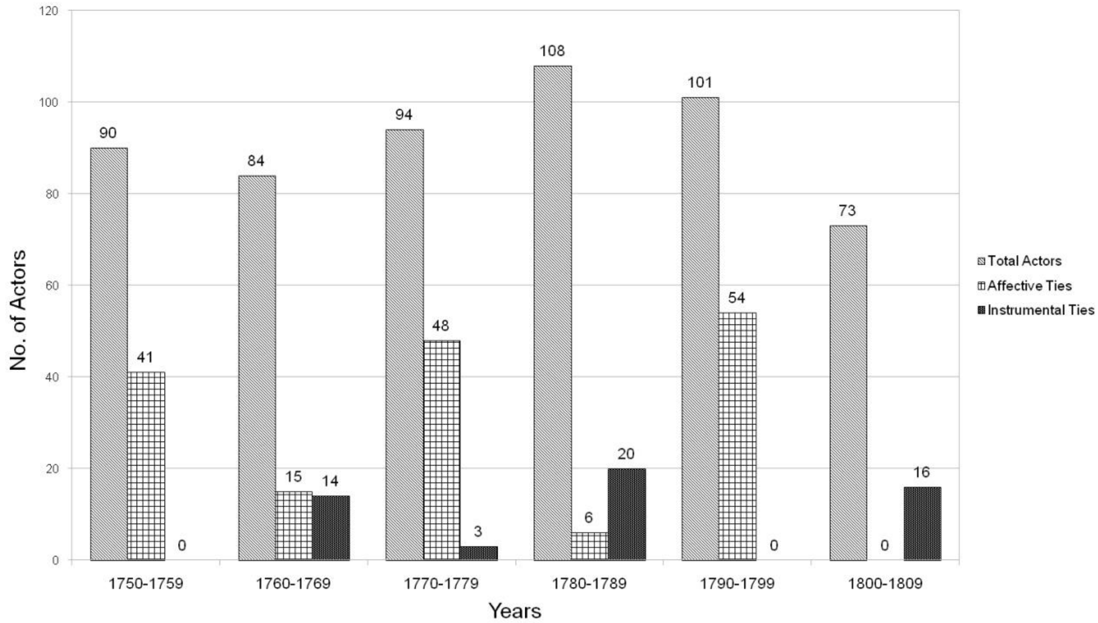
50 As before, the number of voyages refers to the decade in question only.

from using the African Committee for *affective* ties, to *instrumental* ties. Some actors also moved from being non-statistically significant to using the African Committee instrumentally. These included for example, Ralph Earle who was statistically-insignificant in the 1760s and 1770s, and yet used the African Committee *instrumentally* in the 1780s. Another example would be John Tarleton who was not statistically significant in 1770s, 1780s or 1790s but was in the 1800s through using the African Committee *instrumentally.* These actors were more likely to be using the African Committee for commercial reasons throughout their membership, but even more so in periods of crises such as the 1780s and 1800s. What these examples show is that we cannot simply say that those highly invested or involved in the slave trade were always more likely to have *instrumental* ties with the African Committee. Clearly these relationships were complex and individual.

*Model 2*

When regular persistence or intermittence in attendance is allowed for it becomes apparent that more members were using the African Committee in an *instrumental* way, and in more decades, as shown in Figure 5. Whilst in most decades there were more actors using the African Committee for *affective* ties, we again see a reversal in the crisis decades of the 1780s and 1800s. However, we also now see actors using the African Committee for *instrumental* ties in the 1760s and 1770s. Testing for persistence highlights that more actors were in fact using the African Committee for commercial purposes by turning up regularly, if intermittently, which is what we might expect from a trade association. If they did not attend one year, they were more likely to attend the next or the year after.

**Figure 5: Total, *Affective*, and *Instrumental* Ties with the African Committee, 1750-1809 by decade***




Source:352/MD1, Committee Book of the African Company of Merchants, and Model 2.

* The difference between the total and negative and positive actors are the non-statistically significant actors identified in the regression analysis.

The absence of *instrumental* ties in the 1750s just when Liverpool became dominant in the slave trade is still remarkable, especially when there were drinking clubs available for *affective* ties. However, in the 1760s there were nearly as many actors using the African Committee for commercial purposes as for social coinciding with the problems caused by the Seven Years' War. Figure 1 shows that attendance did increase during the war years. During periods of war, commodities such as guns and ammunition that were used for barter on the African coast were banned from export thereby causing problems for the slave traders.[51] This trend was reversed again in the 1770s when far fewer members were using the African Committee *instrumentally* – despite the far higher attendance of that decade. With the continuance of the American Revolution and the onset of abolition during the 1780s actors once again felt the need to attend more regularly in order to defend the trade and deal with the adverse trading conditions. It is strange that actors only used the African Committee for *affective* ties in the 1790s given the French Wars. However, at the same time, calls for abolition were less resulting in the slave traders feeling more confident in their position. What is perhaps most interesting is that during the 1800s all statistically-significant actors used the African Committee for *instrumental* ties. It could be seen that members were rallying in defence of the slave trade. However, attendance remained high in 1808 and was higher in 1809, supporting the supposition that a small number of actors were coming together to strategise taking trade with Africa forward following abolition.

This more nuanced relationship highlighted by Model 2 is also evident amongst those actors with the most *affective* and most *instrumental* ties, as shown in Figure 6. Whilst these groups follow the same trend as in Model 1, they are more divergent, except in the 1800s, when all actors used their relationship with the African Committee *instrumentally* (all have a coefficient of <0). It is worth noting that in the 1750s and 1790s, even those actors with the most *instrumental* ties use them *affectively* (they had a coefficient of .0). However, again we see that the adverse trading conditions provided by the American War of Independence and the start of the abolition movement push both groups of actors to use their ties relatively more *instrumentally* in the 1780s and 1800s The 1800s are particularly interesting, not only do those actors that previously used their tied *instrumentally* do so to a greater extent, some actors that previously used their ties *affectively* moved to using them *instrumentally*. and no statistically-significant actors are noted as using the African Committee *affectively.* The African Committee was not being used for social purposes anymore; it was now being used for its proper purpose, as a trade association. The uses actors made of the African Committee certainly changed over time.

**Figure 6: Actors with the Most *Affective* and Most *Instrumental* Ties, by Decade**

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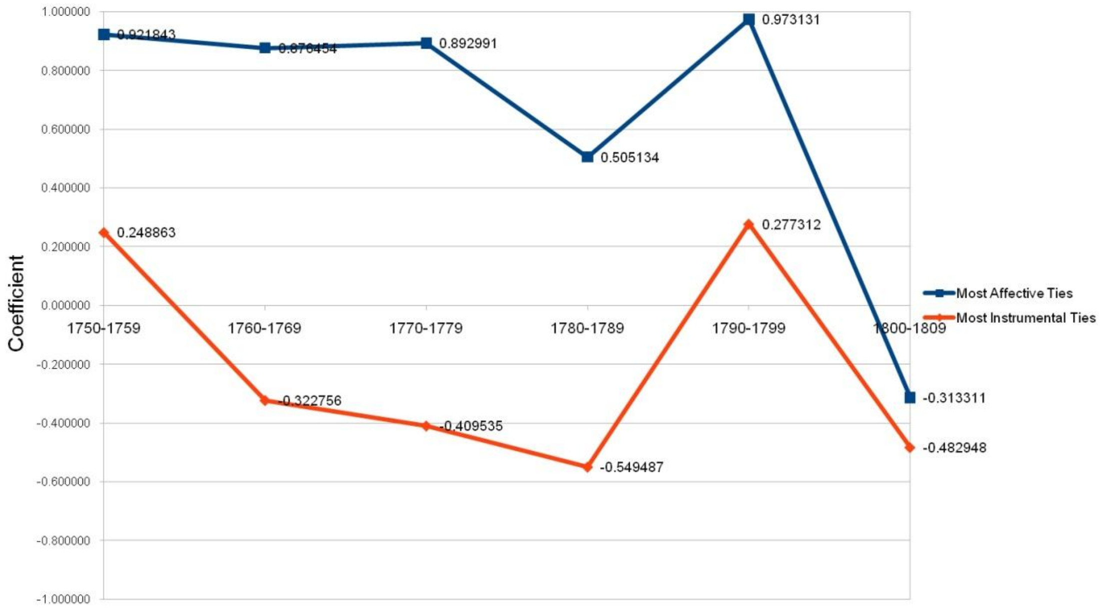
[51] Haggerty, "*Merely for Money"?*, p.208; Richardson, "West African consumption Patterns".



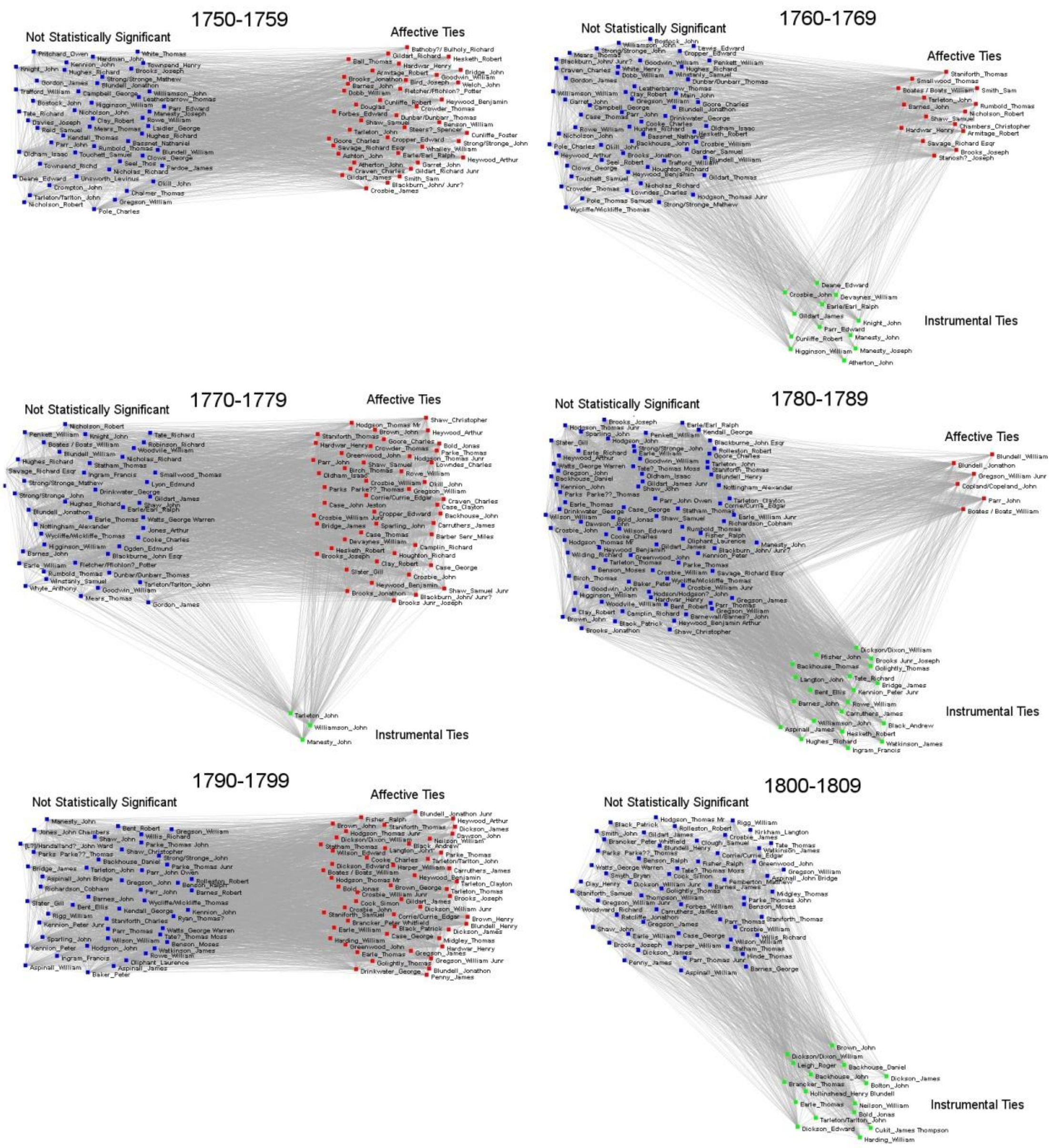

Source:352/MD1, Committee Book of the African Company of Merchants, and Model 2.[52]

Looking at some further case studies through cluster analysis further elucidates the complicated and personal nature of actors' ties with the African Committee. We again see that being a major slave trader or part of a slave trading family does not necessarily mean that those actors accessed the African Committee for *instrumental* ties. In the 1760s Thomas Gildart (zero voyages) was a statistically-insignificant actor, whilst James Gildart (14 voyages) had *instrumental* ties. In the 1780s William and Jonathon Blundell (zero and 1 voyages respectively) had *affective* ties with the African Committee, whilst Henry Blundell (zero voyages) was a statistically-insignificant actor.[53] Only the Manesty family had a reasonably consistent relationship with the Committee, one of the family (John Manesty, Liverpool's representative in London) used the African Committee *instrumentally* in the 1760s, 1770s and 1780s. The Manestys were not identified as using the African Committee *instrumentally* under Model 1 – so allowing for persistence identifies different actors, as well as in more decades.

**Figure 7: Cluster Analysis of Actors with *Affective* and *Instrumental* Ties, by Decade**

[52] The lowest coefficients represent 5 actors (1750s), 9 actors (1760s), 2 actors (1770s), 1 actor (1780s), 1 actor (1790s), and 5 actors (1800s). The highest coefficients represent 1 actor (1750s), 1 actor (1760s), 1 actor (1770s), 1 actor (1780s), 1 actor (1790s), and 1 actor (1800s).

[53] As above, the number of voyages refers only to the decade in question.




Source:352/MD1, Committee Book of the African Company of Merchants, and Model 2.

A number of actors continued to actively interact with the African Committee even once they were no longer involved in the slave trade. Edward Deane (9 voyages), Robert Cunliffe (22 voyages) and the Manestys (17 voyages), were involved in slave trading in the 1750s, but were not involved in the slave trade after 1761. These men appear to be the 'old guard' who had a strong affinity with the African Committee and so continued to access it for *affective* ties. Alternatively, they could have been providing goods for barter on the slave coast, yet not investing in slave trade vessels. They were joined by William Devaynes, who was never involved in slave trading, and yet he and Edward Deane both had *instrumental* relationships with the African Committee in the 1760s.

Only three actors are identified as having an *instrumental* relationship in the 1770s. John Manesty was the only one of these who attended during the American War of

Independence, presumably to report on discussions in the capital. John Williamson (zero voyages) and John Tarleton (8 voyages) did not attend during the war, when the slave trade was curtailed. However, John Tarleton was involved in voyages in 1775 and 1779. This confirms that their attendance was firmly linked to their commercial activities. As before, other actors moved from being statistically-insignificant actors to using the African Committee *instrumentally.* These included John Knight, who moved from the former in the 1750s to the latter in the 1760s. We can clearly see the move of actors as a group towards *instrumental* ties in times of crisis, especially in the 1780s and the1800s. The use of the African Committee in the latter decade is especially interesting. Of those using it *instrumentally*, only John Tarleton showed a proclivity to attend in the second half of the decade, particularly 1807, 1808 and 1809. Indeed, James Cukit (zero voyages) only joined in 1805 and also attended in 1807 and 1809. Roger Leigh (4 voyages) attended in 1803, but also 1808 and 1809. It is ironic that in the decade of abolition, and especially after 1807, the African Committee was being used mainly for *instrumental* purposes, after its original raison d'etre had passed. No doubt those actors were trying to develop new trades on the African coast. Overall however, it is clear that actors used the African Committee in different ways in different periods of time, depending on their need within the wider context.

**Conclusion**

The role of a metropolitan business network changes over time and this is reflected in the relationships that actors had with the African Committee. Previous work has focused on the relationships within such networks between actors themselves using social network analysis tools and techniques. This paper brings together history, regression analysis and visual analytics in a novel interdisciplinary methodology to investigate how and why actors used formal networking institutions such as trade associations. In doing so, it identifies that actors have two types of relationship *with* a network. Actors with *instrumental* ties to a network principally use the network to access tangible resources and information. Conversely, actors with *affective* ties use the network primarily for social support, pleasure and identity conferral. We do accept of course, that many actors may have used trade associations for both types of ties, to differing degrees.

It is clear that despite the fact that we might have expected that members of the African Committee, being a trade association, to have had mostly *instrumental* ties, that in fact most actors had *affective* ties with the institution between 1750 and 1810. A smaller number of actors had primarily *instrumental* ties, which grew relatively stronger in periods of crisis, and some actors even moved to having *instrumental t*ies in these periods. However, many actors moved between having strong ties either way, and being statistically insignificant. It is clear that we have to seriously question how actors used institutions for commercial networking. We can no longer simply accept that such institutions were always a simple economic good, indeed many actors stopped attending just when the slave trade was under threat; we also have to acknowledge that individual actors used these institutions in a variety of ways, according to their private needs and the prevailing economic context. Of course many actors may have joined the African committee for both social and commercial reasons, and their wavering attendance patterns highlight these overlapping ties.

This methodology and case study has highlighted certain features of actors' networking *with a commercial networking institution*:

- Many actors had predominantly *affective* ties, engaging with the institution only in popular periods;
- Therefore, many actors use such institutions for social rather than commercial reasons;
- As a group, actors may respond positively to crises and thereby use the institution more *instrumentally*; this may be by attending more often with 'the herd', or attending more independently;
- At the same time, many actors 'desert' during periods of crisis, not wanting to contribute more *instrumentally*, just when needed;
- Kinship or family ties do not determine how actors will use an institution;
- Therefore, as individuals, a wide range of factors determine how actors interact with an institution.

We believe that the methodology presented here demonstrates for the first time that it is possible to measure actors' relationship *with a networking institution* rather than with one another. Two models are presented, one which measures the propensity to attend when others did, and one which adds a time lag factor which measures a delayed but persistent attendance (or, possibly, alternation). Bringing together economics, history and visual analytics means that the results are produced in a visually appealing and easily accessible way. This methodology also recognises the complexity and individuality of institutional networking.

This methodology could easily be used to measure actors' relationships with other commercial institutions such as guilds or chambers of commerce or even town councils, but also social and cultural institutions such as libraries or religious societies. It can also be used where long-run membership of an institution is available and is suitable for small or large datasets. Membership attendance data can readily be transferred into a panel data format (members were present or absent). Such data can be analysed within existing freely-available statistical packages such as GRETL. The regressions can then easily be exported to other freely-available software such as Microsoft Excel, Pajek or Gephi for visual analysis. Using regression analysis in this manner means that this methodology can be used as part of an iterative and explorative process.

**Bibliography**

Ascott, Diana E., Fiona Lewis and Michael Power, *Liverpool 1660-1750: People, Prosperity and Power*. Liverpool: Liverpool University Press, 2006.

Baldassarri, Delia, and Marion Diani, "The Integrative Power of Civic Networks", *American Journal of Sociology*, no. 113:3 (Nov 2007), 735-80.

Beerbühl, Margrit Schulte, "The Commercial Culture of Spiritual Kinship amongst German Immigrant Merchants in London, c. 1750-1830", in Robert Lee (ed.), *Commerce and Culture: Nineteenth-Century Business Elites*. Farnham, Surrey and Burlington, VT: Ashgate, 2011, pp. 225-54.

Bennett, Robert, J., *The Voice of Liverpool Business: The First Chamber of Commerce and Atlantic Economy, 1774-c.1796*. Liverpool: Liverpool Chamber of Commerce, 2010.

Borsay, Peter, *The English Urban Renaissance: Culture and Society in the Provincial Town 1660-1770*. Oxford: Clarendon Press, 1989.

British Parliamentary Papers, Census Reports: Abstracts of the Answers and Returns, Enumeration (1801), Cass, London, 1968.

Emily Buchnea, "Transatlantic Transformation: Visualising Change Over Time in the Liverpool-New York Trade Network, 1762-1833", *Enterprise and Society*, no. 15:4 (2014), 687-721.

Casson, Mark, C., "An Economic Approach to Regional Business Networks", in John F. Wilson and Andrew Popp (eds.), *Industrial Clusters and Regional Business Networks in England 1750-1970*. Aldershot: Ashgate, 2003), pp. 19-43.

Checkland, Sydney G., *The Gladstones: A Family Biography, 1764-1851*. Cambridge: Cambridge University Press, 1971.

Clemens, Paul G. E., "The Rise of Liverpool, 1665-1750", *Economic History Review*, no. 29:2 (May 1976), 211-25.

Committee Book of the African Company of Merchants trading from Liverpool, 1750-1820, Liverpool Record Office.

Cottrell, A., and R. Lucchetti (2013), GRETL, http:// http://gretl.sourceforge.net/.

Crumplin, Tim, E., "Opaque Networks: Business and Community in the Isle of Man, 1840-1900", *Business History*, no. 49:6 (Nov 2007), 780-80.

Davies, K. G., *The Royal African Company*. London: Longmans, Green and Co., 1957.

Drescher, Seymour, "Whose Abolition? Popular Pressure and the Ending of the British Slave Trade", *Past and Present*, no. 143 (1994), 133-66.

Eltis, David, "The Traffic in Slaves between the British West-Indian Colonies, 1807-1833", *Economic History Review*, no. 25:1 (Feb 1972), 55-64.

Forrestier, Albane, "Risk, Kinship and Personal Relationships in Late Eighteenth-Century West Indian Trade: The Commercial Network of Tobin & Pinney", *Business History*, no. 52:6 (2010), 912-31.

Goddard, Richard, "Medieval Business Networks: St Mary's Guild and the Borough Court in Later Medieval Nottingham", *Urban History*, no. 40:1 (Feb 2013), 3-27.

Sheryllynne Haggerty, "Liverpool, the slave trade and the British-Atlantic empire, c. 1750-75", in Sheryllynne Haggerty, Anthony Webster and Nicholas White (eds.), *The Empire in One City? Liverpool's Inconvenient Imperial Past* (Manchester: Manchester University Press, 2008), pp.17-34.

Sheryllynne Haggerty, *Merely for Money'? Business Culture in the British Atlantic 1750-1815* (Liverpool: Liverpool University Press, 2012).

Sheryllynne Haggerty and John Haggerty, "Visual Analytics of an Eighteenth-Century Business Network", *Enterprise & Society*, 11:1 (2010), 1-25.

Sheryllynne Haggerty and John Haggerty, "The Life Cycle of a Metropolitan Business Network: Liverpool 1750-1810", *Explorations in Economic History*, 48 (2011), 189-206.

Sheryllynne Haggerty, and John Haggerty, "Temporal Social Network Analysis for Historians: A Case Study", Proceedings of the International Conference on Visualization Theory and Applications (IVAPP 2011), Algarve, Portugal, 5 - 7 March, pp. 207 - 217, 2011.

Hancock, David, "The Trouble with Networks: Managing the Scots' Early-Modern Madeira Trade", *Business History Review*, no. 79, Special Edition on Networks in the Trade in Alcohol (Autumn 2005), 467-91.

Hyde, F. E. *Liverpool and the Mersey: An Economic History of a Port 1700-1970.* David and Charles, Newton Abbott, 1971.

Hyde, F. E., B. B. Parkinson and S. Marriner, "The Port of Liverpool and the Crisis of 1793", *Economica,* New Ser., no. 18:72 (1951), 363-78.

Jones, S. R. H, and Simon P. Ville, "Efficient Transactors or Rent-Seeking Monopolists? The Rationale for Early Chartered Trading Companies", *Journal of Economic History*, no. 56:4 (Dec 1996), 898-915.

Lawler, Edward J., Jeongkoo Yoon and Shane R. Thye, "Social Exchange and Micro Social Order", *American Sociological Review*, no. 73 (Aug 2008), 519-542.

Lawton, R., Genesis of Population, in: W. Smith (Ed.), *A Scientific Survey of Merseyside*. For the British Association by University of Liverpool Press, Liverpool, 1953, pp. 120-131.

Leunig, Tim, Chris Minns and Patrick Wallis, "Networks in the Premodern Economy: The Market for London Apprenticeships, 1600-1749", *Journal of Economic History*, no. 71:2 (2011), 413-43.

Longmore, Jane, "Civic Liverpool: 1660-1800", in John Belchem (ed.), *Liverpool 800: Culture, Character and History.* Liverpool: Liverpool University Press, 2006.

Marriner, S., *The Economic and Social Development of Merseyside, 1750-1960*. Croom Helm, London, 1982.

Major, Andrea, *Slavery, Abolitionism and Empire in India, 1772-1843*. Liverpool: Liverpool University Press, 2012.

Mathias, Peter, “Risk, Credit and Kinship in early Modern Enterprise”, in John J. McCusker and Kenneth Morgan (eds.), *The Early-Modern Atlantic Economy*. Cambridge: Cambridge University Press, 2000, pp.15-35.

McDade, Katie, “Liverpool Slave Merchant Entrepreneurial Networks, 1725–1807”, *Business History*, no. 53:7 (2011), 1092-1109.

Montefiore, Joshua, *The Trader’s and Manufacturer’s Compendium; Containing the Laws, Customs and Regulations, Relative to Trade, Intended for the Use of Wholesale and Retail Dealers*, 2 Vols. London: Printed for the Author, 1804.

Morgan, Kenneth (ed.), *The Bright-Meyler Papers: A Bristol West India Connection, 1732-1837*. Oxford: Oxford University Press for the British Academy, 2007.

Nenadic, Stana, “The Small Family Firm in Victorian Britain”, *Business History*, no. 35:4 (1993), 86-11.

Newman, M.E.J,, “Scientific Collaboration Networks. II. Shortest Paths, Weighted Networks, and Centrality”, *Physical Review E*, no. 64, 016132 (2001), 1–7.
.
Latapy, M., Magnien, C. & N. Del Vecchio, “Basic Notions for the Analysis of Large Two Mode Networks”, *Social Networks*, no. 30:1 (2008), 31–48.

Ogilvie, Sheilagh, “Guilds, Efficiency, and Social Capital: Evidence from German Proto-Industry”, *Economic History Review* (2004), no. 57:2, 286-233.

Pearson, Robin and David Richardson, “Networking in the Industrial Revolution”, *Economic History Review*, no. 54:4 (2001), pp. 657-79.

Popp, Andrew, Building the Market: John Shaw of Wolverhampton and Commercial Travelling in Early nineteenth-Century England”, *Business History*, no. 49:3 (May 2007), 321-47.

Price, Jacob M., “Economic Function and the Growth of American Port Towns in the Eighteenth Century”, in *Perspectives in American History*, no. 8 (Cambridge, Ma: 1974), 123-186.

Prior, Ann, and Maurice Kirby, “The Society of Friends and the Family Firm, 1700-1830”, *Business History*, no. 35:4 (1993), pp.66-85.

Richardson, David, “Profits in the Liverpool Slave Trade: the Accounts of William Davenport, 1757-1784”, in R. Anstey and P.E. Hair (eds.), *Liverpool, the African Slave Trade, and Abolition*. Liverpool: Historic Society of Lancashire and Cheshire, 1976, pp.60-90.

David Richardson, "West African Consumption Patterns and their Influence on the Eighteenth-Century English Slave Trade", in Henry A. Gemery and Jan S. Hogendorn (eds.), *The Uncommon Market: Essays in the Economic History of the Atlantic Slave Trade*.New York & London: Academic Press, 1979, pp.303-30.

Rosenband, L. N., "Social Capital in the Early Industrial Revolution", *Journal of Interdisciplinary History*, no. 29:3 (1999) 435-57.

Rose, Mary B., "The Family Firm in British Business, 1780-1914", in Maurice W. Kirby and Mary B. Rose (eds.), *Business Enterprise in Modern Britain from the Eighteenth to the Twentieth Century* (London, 1994), pp.61-87.

Mari Sako, *Prices, Quality and Trust: Inter-Firm Relations in Britain and Japan*. Cambridge: Cambridge University Press, 1992).

Sanderson, F. E., "The Liverpool Delegates and Sir William Dolben's Bill", *Transactions of the Historic Society of Lancashire and Cheshire*, no. 124 (1972), 57-84.

Tibbles, Anthony, " 'Oil not Slaves': Liverpool and West Africa after 1807", in Anthony Tibbles (ed.), *Transatlantic Slavery: Against Human Dignity*. Liverpool: National Museums Liverpool, 1994, pp.73-77.

Williams, Eric, "The British West Indian Slave Trade after Its Abolition in 1807", *Journal of Negro History*, no. 27:2 (1942), 175-9.

Wilson, Arline, "The Cultural Identity of Liverpool, 1790-1850: The Early Learned Societies", *Transactions of the Historic Society of Lancashire and Cheshire*, no. 147 (1998), 55-80.